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4-30-02

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/707,738

DATE: 04/30/2002 16
TIME: 15:08:27

Input Set : A:\-62-5.app
Output Set: N:\CRF3\04302002\I707738.raw

4 <110> APPLICANT: Sette, Alessandro
5 Gaeta, Federico
6 Grey, Howard M.
7 Sidney, John
8 Alexander, Jeffery L.
9 Epimmune Inc.
11 <120> TITLE OF INVENTION: Induction of Immune Response Against
12 Desired Determinants
14 <130> FILE REFERENCE: 018623-006250US
16 <140> CURRENT APPLICATION NUMBER: US 09/707,738
C--> 17 <141> CURRENT FILING DATE: 2002-04-15
19 <150> PRIOR APPLICATION NUMBER: US 08/121,101
20 <151> PRIOR FILING DATE: 1993-09-14
22 <150> PRIOR APPLICATION NUMBER: US 08/305,871
23 <151> PRIOR FILING DATE: 1994-09-14
25 <150> PRIOR APPLICATION NUMBER: US 08/485,218
26 <151> PRIOR FILING DATE: 1995-06-07
28 <150> PRIOR APPLICATION NUMBER: US 60/010,510
29 <151> PRIOR FILING DATE: 1996-01-24
31 <150> PRIOR APPLICATION NUMBER: US 08/788,822
32 <151> PRIOR FILING DATE: 1997-01-23
34 <150> PRIOR APPLICATION NUMBER: US 09/310,462
35 <151> PRIOR FILING DATE: 1999-05-12
37 <160> NUMBER OF SEQ ID NOS: 25
39 <170> SOFTWARE: FastSEQ for Windows Version 3.0
41 <210> SEQ ID NO: 1
42 <211> LENGTH: 13
43 <212> TYPE: PRT
44 <213> ORGANISM: Artificial Sequence
46 <220> FEATURE:
47 <223> OTHER INFORMATION: HA 307-319
49 <400> SEQUENCE: 1
50 Pro Lys Tyr Val Lys Gln Asn Thr Leu Lys Leu Ala Thr
51 1 5 10
53 <210> SEQ ID NO: 2
54 <211> LENGTH: 24
55 <212> TYPE: PRT
56 <213> ORGANISM: Artificial Sequence
58 <220> FEATURE:
59 <223> OTHER INFORMATION: MBP 78-101
61 <400> SEQUENCE: 2
62 Gly Arg Thr Gln Asp Glu Asn Pro Val Trp His Phe Phe Lys Asn Ile
63 1 5 10 15

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Input Set : A:\-62-5.app
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64 Val Thr Pro Arg Thr Pro Pro Pro
65 20
67 <210> SEQ ID NO: 3
68 <211> LENGTH: 12
69 <212> TYPE: PRT
70 <213> ORGANISM: Artificial Sequence
72 <220> FEATURE:
73 <223> OTHER INFORMATION: MT 65 kd 3-13
75 <400> SEQUENCE: 3
76 Tyr Lys Thr Ile Ala Phe Asp Glu Glu Ala Arg Arg
77 1 5 10
79 <210> SEQ ID NO: 4
80 <211> LENGTH: 14
81 <212> TYPE: PRT
82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: 717.01 combinatorial
87 <400> SEQUENCE: 4
88 Tyr Ala Arg Phe Gln Ser Gln Thr Thr Leu Lys Gln Lys Thr
89 1 5 10
91 <210> SEQ ID NO: 5
92 <211> LENGTH: 14
93 <212> TYPE: PRT
94 <213> ORGANISM: Artificial Sequence
96 <220> FEATURE:
97 <223> OTHER INFORMATION: Tet Tox 830-843, T-helper epitope from tetanus
98 toxin p2, peptide 553.01
100 <400> SEQUENCE: 5
101 Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
102 1 5 10
104 <210> SEQ ID NO: 6
105 <211> LENGTH: 13
106 <212> TYPE: PRT
107 <213> ORGANISM: Artificial Sequence
109 <220> FEATURE:
110 <223> OTHER INFORMATION: Tet Tox 1272-1284
112 <400> SEQUENCE: 6
113 Asn Gly Gln Ile Gly Asn Asp Pro Asn Arg Asp Ile Leu
114 1 5 10
116 <210> SEQ ID NO: 7
117 <211> LENGTH: 17
118 <212> TYPE: PRT
119 <213> ORGANISM: Artificial Sequence
121 <220> FEATURE:
122 <223> OTHER INFORMATION: ROIV
124 <400> SEQUENCE: 7
125 Tyr Ala His Ala Ala His Ala Ala His Ala Ala His Ala
126 1 5 10 15
127 Ala

RAW SEQUENCE LISTING

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Input Set : A:\-62-5.app
Output Set: N:\CRF3\04302002\I707738.raw

130 <210> SEQ ID NO: 8
131 <211> LENGTH: 14
132 <212> TYPE: PRT
133 <213> ORGANISM: Artificial Sequence
135 <220> FEATURE:
136 <223> OTHER INFORMATION: Ova 323-326
138 <400> SEQUENCE: 8
139 Ile Ser Gln Ala Val His Ala Ala His Ala Glu Ile Asn Glu
140 1 5 10
142 <210> SEQ ID NO: 9
143 <211> LENGTH: 16
144 <212> TYPE: PRT
145 <213> ORGANISM: Artificial Sequence
147 <220> FEATURE:
148 <223> OTHER INFORMATION: lambda rep 12-26
150 <400> SEQUENCE: 9
151 Tyr Leu Glu Asp Ala Arg Arg Leu Lys Ala Ile Tyr Glu Lys Lys Lys
152 1 5 10 15
154 <210> SEQ ID NO: 10
155 <211> LENGTH: 17
156 <212> TYPE: PRT
157 <213> ORGANISM: Artificial Sequence
159 <220> FEATURE:
160 <223> OTHER INFORMATION: HEL 46-61
162 <400> SEQUENCE: 10
163 Tyr Asn Thr Asp Gly Ser Thr Asp Tyr Gly Ile Leu Gln Ile Asn Ser
164 1 5 10 15
165 Arg
168 <210> SEQ ID NO: 11
169 <211> LENGTH: 13
170 <212> TYPE: PRT
171 <213> ORGANISM: Artificial Sequence
173 <220> FEATURE:
174 <223> OTHER INFORMATION: all-natural analog of pan DR binding peptide
175 965.10 with substitutions L-Ala for D-Ala, Phe at
176 position X2 and Trp at position X6
178 <400> SEQUENCE: 11
179 Ala Lys Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
180 1 5 10
182 <210> SEQ ID NO: 12
183 <211> LENGTH: 13
184 <212> TYPE: PRT
185 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: all-natural analog of pan DR binding peptide
189 965.10 with substitutions L-Ala for D-Ala, Phe at
190 position X2 and Asn at position X6
192 <400> SEQUENCE: 12
193 Ala Lys Phe Val Ala Ala Asn Thr Leu Lys Ala Ala Ala

RAW SEQUENCE LISTING

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Input Set : A:\-62-5.app
Output Set: N:\CRF3\04302002\I707738.raw

194 1 5 10
196 <210> SEQ ID NO: 13
197 <211> LENGTH: 13
198 <212> TYPE: PRT
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: all-natural analog of pan DR binding peptide
203 965.10 with substitutions L-Ala for D-Ala, Phe at
204 position X2 and Tyr at position X6
206 <400> SEQUENCE: 13
207 Ala Lys Phe Val Ala Ala Tyr Thr Leu Lys Ala Ala Ala
208 1 5 10
210 <210> SEQ ID NO: 14
211 <211> LENGTH: 13
212 <212> TYPE: PRT
213 <213> ORGANISM: Artificial Sequence
215 <220> FEATURE:
216 <223> OTHER INFORMATION: all-natural analog of pan DR binding peptide
217 965.10 with substitutions L-Ala for D-Ala, Phe at
218 position X2 and Lys at position X6
220 <400> SEQUENCE: 14
221 Ala Lys Phe Val Ala Ala Lys Thr Leu Lys Ala Ala Ala
222 1 5 10
224 <210> SEQ ID NO: 15
225 <211> LENGTH: 13
226 <212> TYPE: PRT
227 <213> ORGANISM: Artificial Sequence
229 <220> FEATURE:
230 <223> OTHER INFORMATION: all-natural analog of pan DR binding peptide
231 965.10 with substitutions L-Ala for D-Ala, Phe at
232 position X2 and His at position X6
234 <400> SEQUENCE: 15
235 Ala Lys Phe Val Ala Ala His Thr Leu Lys Ala Ala Ala
236 1 5 10
238 <210> SEQ ID NO: 16
239 <211> LENGTH: 13
240 <212> TYPE: PRT
241 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: all-natural analog of pan DR binding peptide
245 965.10 with substitutions L-Ala for D-Ala, Phe at
246 position X2 and Ala at position X6
248 <400> SEQUENCE: 16
249 Ala Lys Phe Val Ala Ala Ala Thr Leu Lys Ala Ala Ala
250 1 5 10
252 <210> SEQ ID NO: 17
253 <211> LENGTH: 25
254 <212> TYPE: PRT
255 <213> ORGANISM: Artificial Sequence

RAW SEQUENCE LISTING

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TIME: 15:08:28

Input Set : A:\-62-5.app
Output Set: N:\CRF3\04302002\I707738.raw

257 <220> FEATURE:
258 <223> OTHER INFORMATION: central immunodominant circumsporozoite repeat
259 region of circumsporozoite protein (CSP) of
260 Plasmodium yoelii (PyB)
262 <400> SEQUENCE: 17
263 Gly Gln Gly Pro Gly Ala Pro Gln Gly Pro Gly Ala Pro Gln Gly Pro
264 1 5 10 15
265 Gly Ala Pro Gln Gly Pro Gly Ala Pro
266 20 25
268 <210> SEQ ID NO: 18
269 <211> LENGTH: 16
270 <212> TYPE: PRT
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: central immunodominant circumsporozoite repeat
275 region of circumsporozoite protein (CSP) of
276 Plasmodium falciparum (PfB)
278 <400> SEQUENCE: 18
279 Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro
280 1 5 10 15
282 <210> SEQ ID NO: 19
283 <211> LENGTH: 6
284 <212> TYPE: PRT
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: protective B-cell epitope tandem repeat from the
289 PyB CSP
291 <400> SEQUENCE: 19
292 Gln Gly Pro Gly Ala Pro
293 1 5
295 <210> SEQ ID NO: 20
296 <211> LENGTH: 21
297 <212> TYPE: PRT
298 <213> ORGANISM: Artificial Sequence
300 <220> FEATURE:
301 <223> OTHER INFORMATION: universal T-helper epitope from tetanus toxin p30
303 <400> SEQUENCE: 20
304 Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys Val Ser
305 1 5 10 15
306 Ala Ser His Leu Glu
307 20
309 <210> SEQ ID NO: 21
310 <211> LENGTH: 12
311 <212> TYPE: PRT
312 <213> ORGANISM: Artificial Sequence
314 <220> FEATURE:
315 <223> OTHER INFORMATION: PyCS.1 Plasmodium falciparum B-epitope
317 <400> SEQUENCE: 21
318 Gln Gly Pro Gly Ala Pro Gln Gly Pro Gly Ala Pro

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 04/30/2002
PATENT APPLICATION: US/09/707,738 TIME: 15:08:29

Input Set : A:\-62-5.app
Output Set: N:\CRF3\04302002\1707738.raw

Please Note:

Please Note: Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:22; Xaa Pos. 3,13
Seq#:23; Xaa Pos. 1,2,3,4,5,6,11,12,13
Seq#:24; Xaa Pos. 1,2,3,4,5,6,11,12,13,14
Seq#:25; Xaa Pos. 1,2,3,4,5,6,11,12,13,14,15

VERIFICATION SUMMARY
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Input Set : A:\-62-5.app
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L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:329 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:333 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:22
L:337 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:22
L:338 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:350 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:354 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23
L:358 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23
L:362 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23
L:366 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23
L:370 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23
L:374 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23
L:375 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
L:387 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:391 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24
L:395 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24
L:399 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24
L:403 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24
L:407 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24
L:411 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24
L:412 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:424 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:428 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:25
L:432 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:25
L:436 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:25
L:440 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:25
L:444 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:25
L:448 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:25
L:449 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0